LEONID GREMYACHIKH

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Google Scholar: NVO2imsAAAAJ

EDUCATION

HSE University

Computer and Information Sciences

Nov 2019 – Oct 2022 Moscow, Russia

- PhD in Applied Mathematics and Informatics
- PhD candidate

HSE University

Data Science

Sep 2016 – Jun 2018 Moscow, Russia

- MS in Applied Mathematics and Informatics
- Grade in Reinforcement Learning = 10
- Grade in Deep Learning = 10
- Thesis theme: "Automation of Satellite Collision Avoidance Maneuvers with Deep Reinforcement Learning"

National Research University Moscow Aviation Institute

Design and Technology of Electronic Equipment

Sep 2009 – Feb 2015 Moscow, Russia

- Specialist in Engineering

EDUCATION / COURSES

Computer Vision

OTUS (2020)

Autumn School on Generative Models

HSE-Yandex (26-29 November 2019)

HARD SKILLS

- Fintech
- Deep Learning
- Computer Vision
- Machine Learning
- Reinforcement Learning
- MLOps

Python
C++

SOFT SKILLS

- presentation skills
- meeting management skills
- communication
- self-management, self-efficiency
- teamwork skills
- mentoring
- documentation

WORK EXPERIENCE

FBS

Leading Big Data Specialist

Sep 2022 – currently Russia

Fintech, DL/ML models, Fraud Detection.

Python ML Research MLOps

Laboratory of Methods for Big Data Analysis

Research Assistant

Apr 2018 – Apr 2023 Moscow, Russia

ML research in different fields of physics, scientific publications, students, online courses.

Python ML Research Physics Papers MLOps Teaching

TensorLab

Head of R&D

Nov 2021 – Oct 2022 Moscow, Russia

Calculating maneuvers and refining spacecraft position predictions.

Python Management ML Research Physics MLOps

ADALISK

Senior Machine Learning Engineer

Aug 2021 – Sep 2022 Moscow, Russia

Computer vision for planning tooth correction.

Python ML DL Computer Vision Research MLOps

Radio Engineering Institute named after academician A. L. Mints

Engineer

Apr 2015 – Apr 2018 Moscow, Russia

Digital signal processing, Signal Analysis, Space Objects Recognition.

Python C++ Mathcad

PROJECTS

Fraud Detection (2022-2024)

- Latent similarity model: converting user operations into code in latent space (time series + transformers) for frod detection and user clustering
- Real-time detection of frauders in time series
- Fraud and anomaly detection based on profit on sudden price changes
- Fraud monitoring in CPA networks
- User risk scoring
- Spread analytics
- Fraud detection based on transaction intersections in cryptocurrency

Python ML DL

Satellite Collision Avoidance Maneuvers (2021-2022)

- maneuvers calculation
- refining position predictions
- web service
- management

Python Management

Computer Vision for working with teeth (2021-2022)

- 3D segmentation and different tasks

Python DL CV

Reinforcement Learning for Poker (2021)

- RL: environment, simulator, algorithms, experiments, research

Python RL

Reinforcement Learning for automatic budget management for advertising campaigns. (2021)

- RL: environment, simulator, algorithms, experiments, research
- Management

Python RL Management

Anomaly Prediction in Storage Area Network (2018-2021)

- a publication "SANgo: a storage infrastructure simulator with reinforcement learning support"
- researched methods for improving Digital Twin of Storage Area Network, tested methods on chaotic systems, developed OpenAI Gym wrappers, applied RL methods
- NLP on logs

Python Docker DL RL NLP

Sixth Machine Learning in High Energy Physics Summer School (2020)

Volunteering, helping students.

Python DL Mentoring

International Data Analysis Olympiad (2020)

Participated in the preparation of Higher School of Economics and Yandex the 3rd international data analysts olympiad. The competition task – build a model that would predict the position of space objects using simulation data.

- analyzed the task and SOTA
- prepared and verified data (ephemeris) using GMAT and SGP4
- prepared a baseline (LR)
- checked and analyzed the solutions of the participants
- answered questions from participants

Python GMAT

Satellite Positioning (2019-2020)

The project task – build a model that would predict the position of space objects using simulation data.

- students mentoring

Python Management Mentoring

Distributed Deep Learning (2018-2019)

- developed Distributed Deep Learning pipelines

Python Docker Azure DL

Model Gym (2018)

- developed and debugged a hyperparameter optimization system

Python ML

Automation of Satellite Collision Avoidance Maneuvers with Deep Reinforcement Learning (2017-2018)

- a publication "Space Navigator: a Tool for the Optimization of Collision Avoidance Maneuvers"
- researched and developed a system for calculating maneuvers for spacecraft based on Machine Learning
- MVP is done
- participated in IAA SciTech Forum 2018

Python DL RL

Sex Prediction via Deep Learning (2017)

- researched Sex Prediction via Deep Learning by person's Friends Graph from social network and friends' photos
- used pre-trained VGG from ImageNet, Social Network Analysis
- collected data from "vk.com"
- obtained better score than the baseline

Python DL Social Network Analysis

PUBLICATIONS

- **Journal Articles**
  - "Online detection of failures generated by storage simulator" (2021). In: *Journal of Physics: Conference Series* 1740, p. 012052.
  - "SANgo: a storage infrastructure simulator with reinforcement learning support" (2020). In: *PeerJ Computer Science*, pp. 1–16.
  - "Space Navigator: a Tool for the Optimization of Collision Avoidance Maneuvers" (2020). In: *Advances in the Astronautical Sciences* 170, pp. 305–319. eprint: 1902.02095.

CONFERENCES & SPEECHES

- SMILES, Moscow, SKOLTECH, international summer school – poster presentation "AI and Satellite Problems" (2020)
- IDAO (International Data Analysts Olympiad) – IDAO Webinar on Data Analysis for Satellite Tracking (2020), webinar
- Space debris: fundamental and practical aspects of the threat, Moscow, Institute of Astronomy RAS and Space Research Institute RAS, Russian conference with international participation – report "Space Navigator" (2019)
- IAA SciTech Forum 2018, Moscow, RUDN, international conference – paper report "SpaceNavigator: a Tool for the Optimization of Collision Avoidance Maneuvers" (2018)

ART PROJECTS

- For All Exists Infinity – VR installation created with the Unreal Engine (2021, exhibition "Game Junction").

TEACHING

- Online course "Machine Intelligence, interdisciplinary perspective", HSE University, 2021-2023
- Seminars "Introduction to Data Analysis", HSE University, 2021
- Academic supervision and mentoring of students – HSE University, 2021 (3 theses defended)
- Online course "Python for Data Science", Skillbox, 2020-2021